

STABILIZED TISSUE PENETRATING CATHETERS

ABSTRACT OF THE DISCLOSURE

A tissue penetrating catheter that is usable to advance a tissue penetrator from within a blood vessel, through the wall of the blood vessel to a target location. The catheter includes at least one stabilizing device thereon for stabilizing catheter prior to advancing the tissue penetrator. The tissue penetrator may extend through a lumen in the body of the catheter and project transversely through an exit port. The stabilizing device may be located closely adjacent to the exit port, or may surround the exit port. The stabilizing device may be one or more balloons, or other mechanical structure that is expandable into contact with the inner luminal wall of the blood vessel. Desirably, the exit port is forced into contact with the blood vessel wall to shorten the distance that the tissue penetrator projects from the catheter body to the target location. The catheter is particular useful for forming blood flow tracts between blood vessels, in particular in coronary revascularization procedures. Methods of utilizing such a catheter to bypass an arterial obstruction is also disclosed.